

**Commonwealth of Kentucky**  
**Division for Air Quality**  
***PERMIT STATEMENT OF BASIS***

Title V draft permit No. V-03-048

Sun Manufacturing Inc.

Williamstown, Kentucky

November 18, 2003

REVIEWER: Sajjad Quabili

Plant I.D. 21-081-00014

Application Log # 55930

**SOURCE DESCRIPTION:**

Sun Manufacturing operates a miscellaneous metal-parts manufacturing plant located at 107 Industrial Road in Williamstown. The paint operation in this plant consist of hand painting lines, dip painting machines, spray booths, rotary spray booths, tumble spray booths, roller coating machines, and chain-on-edge spray booths. 401 KAR 59:225, New miscellaneous metal parts and products surface coating operations is applicable to the source. A regenerative thermal oxidizer is utilized to control plant's VOC and HAP emissions.

**PERMITTING BACKGROUND:**

The source has applied to the Division to renew their Title V permit (Log #55930). Earlier, another application (Log #55527) was submitted to the Division to construct three paint-spraying machines at their plant.

**COMMENTS:**

**Log #55930**

1. The source is potentially major for both combined HAP and single HAP emissions.
2. The source will remain a conditional major source with a cap of 90 tons per year for VOC emissions.

**Log #55527**

1. The potential to emit VOC is 20.77 tons per year for the Roller Coating Machine and Chain-on-edge Machines (EP #7 and 8).
2. The potential to emit combined HAPs is 21.76 tons per year (worst case).

**Testing Requirements:**

Performance test was performed for the regenerative thermal oxidizers per requirement of the initial issuance of the Title V permit. The thermal oxidizer stack test concluded that destruction efficiency for Side A and Side B thermal oxidizers were 96.8% and 96.6% respectively.

Sun shall under go a performance test for both thermal oxidizers within six months of the issuance of the renewal permit. A capture efficiency test shall be performed for chain-on-edge spray booths. The capture efficiency test for the facility shall be performed by Method-204.

The current permit allows Sun to operate five shot blast machines in the parts manufacturing plant. The Division has found that the PTE for PM emissions from the shot blast machines with control device meet the determination of an insignificant activity per 401 KAR 52:020, Section 6. The shot blast machine shall not be operated without control device or with torn bags in the house at any time.

**APPLICABLE REGULATIONS:**

1. 401 KAR 59:225, New miscellaneous metal parts and products surface coating operations at existing facilities is applicable to EP #1 through 6. The source has taken plant-wide VOC emissions cap less than 90 tons per year in the year 2002. Therefore, 401 KAR 59:225 is not applicable for EP #7 and 8 (no back sliding).
2. The source is subject to 401 KAR 59:010, New process operations for the particulate emitted.
3. On August 20, 2003, the EPA issued final rule 40 CFR 63 Subpart M, to reduce toxic air pollutants from miscellaneous metal parts and products surface coating operations. Sun is subject to the rule (as an existing source) to limit air toxic emissions. The source will have up to 3 years from August 20, 2003 to comply with its requirements.

**EMISSION AND OPERATING CAPS DESCRIPTION:**

The source wide VOC emissions cap is less than 90 tons per year.

**Continuous Monitoring:**

Compliance with combustion chamber temperature of the control equipment shall be monitored continuously; that is the recording devices associated with the RTO shall monitor and update the combustion chamber screen.

**PERIODIC MONITORING:**

Compliance with annual emissions cap will be ensured by monitoring, record keeping and reporting specified in the permit. The VOC emissions will be limited to 90 tons per year.

The Division is requiring the source to keep daily records of usage of paintings, coatings, and solvents at each of the assembly lines and also to summarize those records at the end of each month. The source shall also keep records of the monthly and twelve months rolling total for VOC and HAP emissions at each of the plant each month. The keeping of daily records for particulate matter is not required as PM emissions are far less than the allowable limit of 2.34 pounds per hour for each affected facility.

**OPERATIONAL FLEXIBILITY:**

Operational flexibility is allowed under the permit by not placing throughput or emissions limits on individual machines, but by placing all machines under a plant wide emissions cap (See Periodic Monitoring above).

**CREDIBLE EVIDENCE:**

This permit contains provisions which require that specific test methods, monitoring or record keeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.